

THIS MEMO IS EXPIRED

May 31, 2001

MEMORANDUM NO. 08-01

TO: DISTRICT CONSTRUCTION ENGINEERS
DISTRICT MATERIALS ENGINEERS

FROM: Greg Xanders, State Construction Engineer

COPIES: Bill Albaugh, Tom Malerk, Douglas Townes, John Goodknight,

SUBJECT: QUALIFIED TECHNICIANS ON FHWA PROJECTS

On June 28, 2000, Mr. Ken Morefield sent a letter to Mr. James E. ST. John, FHWA Division Administrator, describing how the Department would comply with Code of Federal Regulations (CFR) 637. This letter was accepted and approved by the FHWA as the Department's good faith effort. In order to meet the "qualified technician" portion of CFR 637, the Department's Construction Training and Qualification Program (CTQP) was approved. Although some States met the June 30, 2000 deadline with "qualified technicians", Florida's promise to carry out the CTQP with its target dates for having "qualified Technicians" was accepted.

The target dates for having qualified Technicians is listed in the Construction Training Manual. Copies of exerts listing these dates has been included as attachment 1 - 4. The purpose for this memorandum is to make sure we are meeting these dates. If for any reason the Department is unable to meet these qualification dates, an appeal to the FHWA will need to be submitted.

Please review the attached qualification dates. Please survey your active Federal-Aid construction projects to determine if the Department is meeting its target dates. This survey should include Consultant CEI personnel as well as DOT CEI personnel, Consultant laboratory employees as well as District laboratory employees. Each DCE and DME needs to let me know if you are in compliance with the qualification dates. If any projects are not in compliance, please list corrective action that the District plans to take such as target dates for getting these technicians qualified. Any extenuating causes for non compliance would also be helpful (such as lack of training budget, lack of classes, etc.).

Please send your responses to Douglas Townes with a copy to me by June 13. 2001. If you have any questions, please call Douglas at (SC 994-4151).

GX/tc

ATTACHMENT 1

Aggregates

ALL ACCEPTANCE TECHNICIANS MUST BE QUALIFIED BY **OCTOBER 2, 2000**

Qualified Sampler:

This is the QC Technician at the plant or mine, who obtains an acceptance sample for testing. Either the front-end loader operator or the QC Technician directing the acceptance sampling must be a qualified sampler.

Any person who samples aggregates for verification of material quality, resolves disputes or performs Independent Assurance (IA) must also possess this qualification.

Aggregate Field Testing:

This is the QC Technician, plant or mine employee who must be qualified to obtain acceptance samples and perform acceptance tests such as gradation, minus 200 and organic impurities. The ACI Aggregate Field Technician program goes on to cover dry preparation of soils, total moisture content, LL, PL and PI for those technicians needing to perform these tests.

Department employees working with mine sources should obtain the ACI Aggregate Field.

Any person who samples or tests aggregates for material quality, resolves disputes or performs Independent Assurance (IA) for the appropriate tests methods must also possess this qualification.

LBR Technician:

This is the QC Technician, private lab or contractor employee who must be qualified to perform acceptance tests such as moisture-density relations of soils, Limerock Bearing Ratio and Lab moisture content of granular soils by microwave oven.

Department employees developing moisture-density relations or performing the LBR test should obtain this qualification.

Any person who verifies aggregates material quality, resolves disputes or performs Independent Assurance (IA) must also possess this qualification.

ALL ACCEPTANCE TECHNICIANS MUST BE QUALIFIED BY OCTOBER 1, 2001

Aggregate Laboratory Testing:

This is the QC Technician who must be qualified to perform acceptance tests such as Specific Gravity and Absorption of Coarse / Fine Aggregates, Unit Weights and Voids in the Aggregate, and L.A. Abrasion tests. The ACI Aggregate Laboratory Technician program goes on to cover sulphate soundness, fine aggregate angularity, fractured faces, and flat and elongated particles.

Department employees working with mine sources should obtain the ACI Aggregate Laboratory Qualification.

Any person who tests aggregates for material quality, resolves disputes or performs Independent Assurance (IA) for the appropriate tests methods must also possess this qualification.

Aggregate Chemical Analyst:

This is the QC Technician who must be qualified to perform acceptance tests such as Carbonate or Acid Insoluble Content.

Any person who tests aggregates for material quality, resolves disputes or performs Independent Assurance (IA) for the appropriate tests methods must also possess this qualification.

ATTACHMENT 2

Asphalt

ALL ASPHALT TECHNICIANS ON SUPERPAVE PROJECTS MUST BE QUALIFIED BY
JUNE 30, 2001

NOTE: Existing DOT or CTQP qualifications will be acceptable on projects with type-S asphalt specifications.

Roadway Level I:

This is the technician who must be qualified to perform QC Tests or acceptance tests and relevant calculations such as Surface Tolerance (Rolling Straightedge and Cross Slope), Random Sampling, Core Sampling and Testing, and Nuclear Density.

Any person who verifies roadway characteristics, resolves disputes or performs Independent Assurance (IA) must also possess this qualification.

Plant Level I:

This is the technician who must be qualified to sample hot mix, aggregate or asphalt cement and perform QC Tests or acceptance tests and relevant calculations such as Bulk Specific Gravity, Max Specific Gravity, Gyratory Compaction, AC Content by Ignition Oven or non-Chlorinated Solvent Method, Gradation and Permeability

Department employees performing acceptance tests at the plant should obtain this qualification.

Any person who verifies asphalt material quality, resolves disputes or performs Independent Assurance (IA) must also possess this qualification.

Roadway Level II:

This is the more experienced roadway technician who must be knowledgeable of the specification requirements, surface preparation, paver and roller operations, balancing of the delivery, paving and compaction operations, uniformity and consistency of the mat and components of hot mix asphalt placement. Additionally this individual is able to identify trends, norms, problem areas, other best construction practices and adjust operations as necessary.

Attachment 2 (continued)

Department employees performing Resident Asphalt Engineer and Lead Inspector duties at the roadway should obtain this qualification.

Any person who verifies asphalt specification compliance of material quality or performs Independent Assurance (IA) must also possess this qualification.

Plant Level II:

This is the more experienced plant technician who must be knowledgeable of the specification requirements, stockpiling, cold feeds, blending, heating, drying and adjustments, interpreting quality control charts, plant calibration/inspection/operation, temperature control, scale checks, material storage and delivery. Additionally, this individual is able to identify trends, norms, problem areas and other best construction practices related to uniformity and consistency of mix and intricacies of hot mix asphalt production.

Any person who verifies asphalt specification compliance of material quality or performs Independent Assurance (IA) must also possess this qualification.

Asphalt Mix Designer:

This is the experienced bituminous specialist who must be qualified to design hot mix asphalt. They have the knowledge of aggregates, bituminous materials, applicable test methods for design, volumetric calculations, GTR mixes, RAP mixes and Florida=s Superpave specification.

Department employees performing District Bituminous Engineer duties should obtain this qualification. Department representatives responsible for verifying the asphalt mix design must have this qualification.

Asphalt Quality Control Manager:

This is the individual responsible for the contractor=s asphalt quality management effort and who is identified in the Quality Control Plan to perform analysis and control of the quality of the product, can determine the coordination of production/paving operations, and understands the intent of statistically based, performance related specifications (consistency, uniformity, variability, volumetric criteria, random sampling and composite pay factors).

The Department=s District Bituminous Engineers should have this qualification. Department representatives responsible for recommending approval of the Contractor=s Asphalt QC Plan must have this qualification

ATTACHMENT 3

Concrete

ALL ACCEPTANCE TECHNICIANS MUST BE QUALIFIED BY **JANUARY 1, 2001**

NOTE: ACI Concrete Certifications are a critical part of maintaining your FDOT qualifications.

Concrete Field Inspector - Level I:

This is the QC Technician who must be qualified to perform acceptance tests such as slump, temperature, air content and making/curing concrete cylinders.

Any person who tests concrete material properties or performs Independent Assurance (IA) must also possess this qualification.

Concrete Transportation Construction Inspector (CTCI) - Level II:

This is the contractor's representative who must be responsible for the quality of the concrete being placed on major bridge projects, not limited to substructure or superstructure.

The Department's lead inspector on concrete bridge structure must have this qualification.

Concrete Laboratory Technician - Level I:

This is the concrete strength technician who must be qualified to break cylinders and record concrete strength for material acceptance.

Any person who tests concrete for material quality compliance or performs Independent Assurance (IA) must also possess this qualification.

Concrete Laboratory Technician - Level II:

This is the mix designer for concrete mix submittals.

The Department representative responsible for verifying the concrete mix design must have this qualification.

Concrete Batch Plant Operator:

This is the contractor employee who is identified in the Quality Control Plan as the individual who batches the concrete mix.

Department employees may obtain this qualification for professional knowledge but it is not required for FDOT personnel

ATTACHMENT 4

Earthwork

ACCEPTANCE TECHNICIANS MUST BE QUALIFIED BY **MARCH 1, 2000**

NOTE: All trainees who were qualified through the Department=s Density Earthwork Inspection Training (DEIT) program are automatically qualified as ECI Level I and Level II.

Earthwork Construction Inspection - Level I:

This is the QC Technician who must be qualified to perform acceptance tests such as Nuclear Density Tests, Speedy Moisture, sampling soils and reporting results in the Density Log Book.

Any person who tests earthwork to verify material quality, resolves disputes or performs Independent Assurance (IA) must also possess this qualification.

Earthwork Construction Inspection - Level II:

This is the QC Technician, private lab or contractor employee who must be qualified to perform acceptance tests (if Level I qualified), has knowledge of Density Theory, preparation, completion, Certification of the Density Log Books, Florida Specifications and Design Standards. This individual will also perform base acceptance tests and inspection.

For the Department, the function targeted is the earthwork inspector for the project.

Any person who verifies earthwork specification compliance of material quality or performs Independent Assurance (IA) must also possess this qualification.